

Dark Field Illumination

Dark field illumination excludes the unscattered beam from the image. It works by illuminating the sample with light that will not be collected by the objective lens, and thus will not form part of the image. As a result, the field around the specimen (i.e. where there is no specimen to scatter the beam) is generally dark but the objects that scatter the illumination beam are bright.

Dark field microscopy is a simple yet effective technique and well suited for following applications:

- Live and unstained biological samples, such as water-borne single-celled organisms.
- Cellular analysis or samples that have not gone through the staining process.
- Precision unstained plastic parts.
- Fibers, hairs, yeast and protozoa.
- Minerals and crystals, thin polymers and some ceramics.
- Forensics and latent fingerprint.
- Examining external details, such as outlines, edges, grain boundaries and surface defects.

